

Crisis and Recovery: Urban Public Transport in Morocco

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The developments in urban public transport in Morocco in the 1980s, with focus on the two largest cities, Casablanca and Rabat, are traced. In view of the near collapse of transport services provided by municipal enterprises in the early 1980s and their difficult financial situation, the underlying problems of infrequent fare adjustments, failure to compensate the enterprises for the low social fares of school children, and organizational rigidity inherent to the public sector, are identified. Several early propositions expected to resolve the urban transport crisis are discussed, including the market segmentation experiment introduced by the Rabat municipal transport company (the provision of seat-only, double-fare services), and plans to construct new urban rail systems in the two cities. An approach that was implemented in 1985 has become a success story in North Africa. It includes the deregulation of public transport services in Casablanca and Rabat, in which private operators are allowed to break the public enterprise monopoly, albeit only in the first-class (seat-only) market. The principal issues remaining 5 years into the experience with deregulation, notably what to do with insolvent public enterprises, how to help the private sector achieve its full potential, and how to protect the most vulnerable travelers—the urban poor—are reviewed.

Throughout the past decade, urban transport problems in the two largest Moroccan cities, Casablanca and Rabat, have attracted much attention in the professional community. The earliest interest centered on the difficulties experienced by the municipal transport companies (MTCs), which for some 20 years served the eight largest Moroccan cities, operating largely as monopolies (1–7). By the late 1970s, the majority of the companies were in chronically poor financial condition and unable to maintain service at past levels, much less to expand capacity to meet the increasing demand for urban travel. The second wave of research followed the 1984 decision by the Moroccan government to start deregulating this sector and the subsequent start-up of private transport operations in Casablanca and Rabat (8–11). Somewhat in the background, but no less real, has been yet another subject, the feasibility of rail-based systems for the two cities, addressed mainly in consultants' reports (12–14).

Five years into the experience with deregulation, with the private sector flourishing, the authorities are on the threshold of important decisions concerning the destiny of MTCs, the expansion of private sector operations into different services and other cities, and the introduction of new, rail-based modes.

On the basis of a larger study (15), the preceding themes are integrated into a broader, policy-oriented picture. From the examples of Casablanca and Rabat, factors are identified that have contributed to urban transport problems in Morocco, reasons are highlighted for the demise of municipal

transport enterprises, and the early experience with the new private operators is reviewed. Future directions for the development of urban public transport in the country are then outlined and discussed. The field work for the study, consisting mainly of in-depth interviews in the two cities, was carried out in early 1988; statistical data were generally those available at the end of 1986 (in Rabat) and in 1987 (in Casablanca).

THE COUNTRY AND URBAN BACKGROUND

Morocco has about 23 million people, and expects to reach 32 million by the year 2000. It belongs to the group of lower middle-income economies (1987 GNP per capita was \$620), growing at about 3 percent per annum, just above the population growth rate. After a balance of payments crisis in 1983, with foreign debt reaching about 70 percent of GNP, the country embarked on a macroeconomic stabilization program and a series of supporting sectoral adjustments. These changes have started giving positive results in terms of reducing budgetary subsidies, rationalizing public investment, and increasing exports, while controlling inflation and maintaining per capita incomes.

Moroccan cities have been growing faster than rural areas; urban population is currently 44 percent of the total and is expected to reach 50 percent by the end of the century. Much of the growth has been through in-migration from the countryside, the new arrivals settling down at the urban fringe. Casablanca, with 2.5 million people in 1985, is the dominant urban area economically, politically, and culturally. The Rabat urban area has about 1 million, and another 10 cities have populations between 100,000 and 500,000. Three-fourths of all urban jobs are in the private sector, where artisanal and commercial jobs dominate.

DEMAND AND SUPPLY CHARACTERISTICS OF URBAN TRANSPORT

Demand for travel is determined by the population growth and structure, the cultural and work habits, incomes, and urban spatial patterns. Apart from the rapid growth, two aspects of Morocco's urban population are vital for understanding transport problems here: (a) the predominance of young people (50 percent of total are under working age); and (b) the high incidence of poverty, with 28 percent of people under the urban poverty threshold of 2,473 Moroccan Dirhams (Dh) (equivalent to \$246) expenditure per person, per

year. The young generate massive demand for school-related travel, while both youth and poverty lead to a powerful downward pressure on public transport fares. Average incomes are low: in 1985, an average urban household spent Dh 26,667 (\$2,650) and the minimum guaranteed monthly wage was about Dh 820 (\$81). Consequently, car ownership rates are low as well—about 50 cars per 1,000 population in larger cities, and 20 to 30 cars per 1,000 population in smaller cities. The local life style, with its habitual two-shift work and school day, poses a heavy load on the urban transport system.

Moroccan cities are characterized by two centers that typically coexist side by side: the traditional *médina*, with high population densities and narrow, meandering streets fit mostly for walking, and the modern downtown, with its high-rise commercial buildings and rectangular grid-type street networks. These centers generate strong radial demands, easy to serve by public transport in smaller cities; as the cities expand, the lower-income residents and newly arrived migrants who dwell in peripheral communities find their center-bound trips increasingly long. Industrial estates, located away from downtowns, pose a different problem, that of interperipheral connections for industrial workers.

Because a great majority of people (80 percent of households in Casablanca) do not own cars, the brunt of the demand falls on public transport, two-wheel vehicles, and walking. Surveys carried out in the 1975–1980 period indicated that walking accounted for a large proportion of daily trips, between 50 percent in Casablanca and 84 percent in Tangier (1). The modal share of public transport was modest, 30 to 35 percent of nonwalking trips in larger cities and approaching 50 percent in smaller ones. Two-wheel vehicle share was important at 26 to 27 percent of nonwalking trips in the largest cities, and up to 66 percent in Marrakech. Altogether, the mobility rates were low (0.95 nonwalking trips per person per day and less, depending on the city), reflecting suppressed demand for travel. The key factors underlying the situation included a low supply of conventional public transport services (prevailing until the mid-1980s), relatively high fares, and the untapped potential of paratransit modes (taxis and various types of small, shared vehicles).

From 1964, when the first MTC was created in Casablanca, until 1985 when private companies were reintroduced (again in Casablanca), MTCs were basically the monopoly providers of conventional transport services in eight major cities. Neither in the 1964–1979 period, when they were covering their costs, nor in the post-1979 period, when the majority of MTCs were in a difficult financial position, did the supply of services approach reasonable levels. In larger cities, ratios of 4,000 to 6,000 inhabitants per bus in circulation prevailed, against a modest norm (adopted by the Government) of one standardized bus for each 3,000 inhabitants.

With the exception of schoolchildren and several categories of state employees who pay sharply discounted fares, regular passengers pay fares that are far from low relative to their incomes, especially when their daily work journey requires transfers. On the basis of Casablanca data from 1985, minimal travel requirements would take about 11 percent of revenues for urban households at the 30th percentile, but about 30 percent for families among the poorest 10 percent. A person at the poverty threshold would spend about 24 percent of his or her expenditures on bus fares.

Paratransit modes, widespread in many large cities of the developing world as cheap and efficient alternatives to conventional public transport, are largely absent in Morocco. Even the most accepted among paratransit modes, the taxi, is in short supply because of tight regulations that limit market entry and impose low fares. If the definition of paratransit is stretched somewhat, then one of its forms has been flourishing: the transport for own-account. These are bus fleets operated by government agencies and other large employers for the benefit of their workers.

SECTORAL INSTITUTIONS

As the patron of local governments in Morocco, the Ministry of Interior (MOI) has a comprehensive, supervisory authority over urban transport, both functional and financial. This authority extends over all activities of MTCs, the taxis, traffic management, police, and urban planning. The Ministry of Finance (MFIN) exercises a strict accounting control over MTCs (a priori permissions even for the smallest payments are required, in addition to normal audits), but apparently does not get involved in policy. Interventions of the Ministry of Transport (MTR) are limited to the intercity network and stop at the city gates.

The purview of the MOI includes the creation of MTCs, appointment of their managing directors and members of the board, approval of operating budgets and investment plans, and authorization of fare changes. MOI also grants operating and capital subsidies, and helps to arrange loans through the Fonds d'Equipements Communal (FEC), a public infrastructure fund lending to local governments and their agencies. Within the MOI, an urban transport division, located within the directorate for municipal companies and franchises, is responsible for MTCs. This division collects and analyzes operational and financial data of MTCs with reasonable efficiency, but lacks both the capacity and the mandate to develop policies and lobby for their adoption by the decision makers.

At the urban area level, the government is organized in two interweaving branches: (a) provincial, representing the national government and headed by officials appointed by the MOI; and (b) municipal, locally elected. A province typically covers several urban areas (in addition to rural municipalities). Only the agglomerations of Casablanca and Rabat are large enough to have their own provincial governments, *Wilayas* (corresponding to French *préfectures*); a corresponding elected body for these agglomerations is made up of elected officials of their constituent municipalities. For all practical purposes, major administrative and technical functions are in the hands of the provincial governments. In matters related to urban transport (as in all other sectors), the *Wilaya* officials (governors, secretaries-general) execute policies adopted by the MOI. The role of elected officials in urban transport appears to be limited largely to demands for route and service changes. A process of decentralization is underway in which financial resources and the decision-making power are being progressively shifted from the national to local governments, which at present dispose of only 5 percent of all public expenditures in Morocco. One of the major stumbling blocks in this process is low technical and managerial capacity of the municipalities. In the field of urban public transport and traffic

management, this capacity is minimal at present not only in smaller cities, but even in the largest ones.

DIMENSIONS OF A CRISIS: MUNICIPAL TRANSPORT COMPANIES

Eight MTCs employ more than 7,000 people, carrying more than 1 million passengers per day, and bring in about Dh 433 million (U.S. \$48 million) in revenue per year (Table 1). According to size, they fall into three groups: Casablanca leads with 380 serviceable buses (of which 320 are in circulation; Rabat follows with 176 (about 150 in circulation, of which only 81 are standard buses); Fez is close with 150 buses (110 in circulation); and the remaining five are small with 27 to 73 buses (20 to 60 in circulation). Most of these companies once operated larger fleets: Casablanca had about 550 buses in 1982 (452 in circulation) and Rabat had 185 buses in 1983 (176 in circulation, of which 150 were standard buses).

Judged in terms of fleet and staff productivity, some MTCs (Fez, Marrakech, and Agadir) perform reasonably well, with annual trip lengths falling between 77,000 and 95,000 km per bus in circulation, and daily loads exceeding 1,200 passengers per bus. They employ between seven and eight staff per bus in service, which is on the high side but acceptable for firms with a low level of outside services. The proportion of active fleet that is in daily circulation exceeds 85 percent, suggesting effective maintenance services. Other MTCs are not doing as well—some are evidently overstaffed (13 employees per bus in circulation in Tangiers; 10 in Casablanca, Rabat, and Meknes), or have inefficient maintenance departments (only 59 percent of the active fleet circulates in Tangiers). In four companies, the number of passengers per bus-kilometer exceeds five, indicative of severe bus overloading. Still, with the exception of Tangiers MTC, which has clearly inferior results, these companies show positive results in at least some dimensions of performance.

Since the late 1970s, MTCs have suffered from chronic financial difficulties. Only two (Fez, Agadir) have consistently managed to cover their total operating costs from fare revenues. At the other extreme, Rabat and Tangiers have yet to meet their direct operating costs. The remaining four often covered their direct costs, but rarely, if ever, covered the total. The long-term impact of operating losses is reflected in the debt-assets ratio. Of the four largest companies, three have debts substantially larger than the value of assets (155 percent in Casablanca, 175 percent in Rabat, and 191 percent in Marrakech); smaller companies, with the exception of Agadir, do not fare much better. In 1986, the total accumulated debt was about Dh 340 million. Short-term debts account for between 60 and 100 percent of the total debt, a sure sign of unresolved financial relations at the policy level.

The lack of financial capacity has been the prime factor behind the failure of MTCs to renew, much less expand, their fleets in the face of growing demands for transport. On the service side, this problem has resulted in excessive waiting times, overcrowded terminals and buses (sometimes with loads higher than 150 passengers), and ticket fraud. Other impacts include a shift to other modes and walking, and a loss of mobility, particularly serious in large cities. The negative impact of all this on living standards and access to jobs for

individuals, as well as aggregate costs to the urban economy in terms of diminished productivity and sheer time lost, while incalculable, is likely to be enormous.

Causes of Deficit

Behind the operating losses of MTCs lie intertwined problems both on the cost and revenue sides. The following account is based on a review of the two largest MTCs, in Casablanca and Rabat. Bearing in mind the pitfalls of making international comparisons even with better data than available here, average costs (per bus-kilometer) of these two companies appear to be two to three times higher than in many companies in Africa and Asia, and have a ratio of about 1:2 to costs of bus companies in French cities (with the ratio of GNPs for the two countries being 1:13) (16,17). The underlying problems, on the cost side, are as follows.

1. First, there were problems caused by the nature of the administrative system to which MTCs belong. Like all public enterprises in Morocco, MTCs have operated in a highly constrained organizational environment. The degree of outside control has been overpowering and, conversely, the management has had a narrow maneuvering space and little accountability. The MOI controlled investments, fares, and higher-level appointments; local authorities imposed route and service policies; the MFIN controlled all expenditures with *ex ante*, in addition to *ex post*, audits; the Ministry of Industry controlled both local purchasing and imports.

2. Second, there have been problems related to personnel. The staff of MTCs have enjoyed a status akin to that of civil servants, with salaries and benefits superior to those of most bus passengers. Labor costs accounted for about 40 to 50 percent of operating costs, high for a low-income country. Past hiring practices were not always motivated by enterprise needs. Once employed and past a probation period, employees could be fired only for serious refractions of duty. This made it impossible to reduce staff in parallel with fleet reduction, or as an austerity measure. The promotion system was based largely on seniority. All this has led to overstaffing, and a work force both laden with long-time employees and short on skilled workers and experienced managers. Difficult operating conditions, a drop in salaries in real terms in the 1980s, and a general erosion of the MTC status have all contributed to low staff morale, absenteeism, vandalism, and poor productivity. Casablanca and Rabat MTCs use 130 to 140 staff to produce 1 million bus-km, compared with 60 staff for better companies the world around (18). (However, Fez, Marrakech, and Agadir MTCs are much better at 80 to 90 staff per 1 million bus-km).

3. Third, the continuing deficit itself has acted to increase operating costs. The shortage of investment funds meant that buses were used beyond their economic life; severe overcrowding also increased the rate of breakdowns (in addition to losses of revenue caused by fraud). Maintenance tools and materials could not be replaced or modernized, and data processing equipment and productivity-aimed technical assistance could not be purchased. Difficulties with buying spare parts has immobilized many buses for long periods of time,

TABLE 1 PRINCIPAL MOROCCAN CITIES AND THEIR PUBLIC TRANSPORT ENTERPRISES

POPULATION/AUTO OWNERSHIP	Casa	Rabat	Fes	Marrak	Meknes	Tanger	Safi	Agadir
1985 Area population (000)	2456	1018	483	472	338	298	208	120
1985 Auto registrations (000)	132	54	12	12	10	13	5	6
PUBLIC TRANSPORT COMPANY DATA								
Year of creation	1964	1965	1971	1968	1968	1965	1977	1976
Annual passengers (mill)	200	61	61	24	20	8	10	27
Daily passengers (000)	549	168	167	65	55	22	27	73
Active fleet (buses)	380	203	150	60	55	27	42	73
Buses in circulation	320	146	110	53	41	16	36	62
Annual (million) kms run	23	11	9	5	3	1	2	6
Staff	3238	1470	758	448	397	209	244	477
Operating revenues (Dh million)	202	69	55	28	20	9	12	38
Operating costs (Dh million)	199	84	51	28	22	11	13	38
Total assets (Dh million)	128	60	na	8	10	5	7	10
Total debt (Dh million)	198	104	na	15	9	4	7	3
Short-term debt (Dh million)	110	62	na	12	9	2	3	2
RATIOS								
Autos/1,000 population	54	53	25	25	30	44	24	50
Population/PTC bus in service	7675	6973	4391	8906	8244	18625	5778	1935
Passengers/Bus-kilometre	9	5	7	5	7	7	5	5
Daily passengers/bus in service	1715	1148	1522	1222	1346	1353	762	1181
Buses in circ/Active fleet(%)	84	72	73	88	75	59	86	85
1,000 km/bus in circ/year	72	77	84	95	74	70	62	89
Staff/Bus in service	10	10	7	8	10	13	7	8
Staff/Million bus-km	140	131	82	89	131	187	110	86
1,000 passengers/staff	62	42	81	53	51	38	41	56
Revenues/costs(%)	101	81	107	100	92	80	95	101
Average costs (Dh/bus-km)	8.6	7.5	5.5	5.6	7.1	10.1	5.9	6.8
Average revenue (Dh/passenger)	1.0	1.1	0.9	1.2	1.0	1.1	1.2	1.4
Total debt/assets (%)	155	175	-	191	85	74	93	30
Short term debt/total debt (%)	55	59	-	80	100	59	42	62
Year to which data apply	87	86	86	85/86	85/86	84/85	85/86	85/86

Notes:

(1) When a bi-annual period is given in the last row, generally the balance sheet alone is from the earlier year. Year-to-year variability is considerable.

(2) For orientation, the average exchange rate per US\$ was Dh 9.10 in 1986 and 8.36 in 1987.

or permanently. MTC Rabat is a striking example of this with a book fleet of 299 buses, of which only 176 are active. Finally, the lack of working capital pushed MTCs to rely on short-term loans, whose higher interest rates provided an extra push to cost escalation.

On the revenue side, the generic reason for deficits has been the failure of the government to pay full compensation for various constraints imposed on MTCs for social and political reasons. To start with, regular (nondiscount) fares were kept at levels that did not reflect costs. The government infrequently gave approval to increase fares (five times since 1965 in Rabat), allowing revenues to fall far behind in real terms (6). This policy was particularly serious at the time of the second oil price shock of 1977–1980, and the related increase in the world prices of industrial products to which bus companies are particularly sensitive. When approved, the scale of fare increases was at times so high (40 to 43 percent) that it led to substantial losses of patronage (and revenue).

The second major constraint on the revenue had to do with the so-called “social” fares. Several categories of passengers have benefitted through free rides or inexpensive passes. In Rabat in 1986, subscribers accounted for about 29 percent of all trips, but only for 6 percent of revenue; in Casablanca (in 1987), the corresponding numbers were 19 and 4 percent. Even if the passenger statistics are not fully credible, these ratios reflect an actual average fare that is devastating for the finance of MTCs. The situation has deteriorated even further with the recent flight of regular-fare passengers to private operators. The largest group among the privileged are schoolchildren and university students. In Casablanca in 1987, monthly passes for unlimited rides cost Dh 40 (\$4.78) for schoolchildren and Dh 50 (\$5.98) for students (doubled in 1986, a first increase for this pass in many years). With conservative assumptions on trip frequency (even without counting the transfers), this amounts to a discount of about 64 percent off Dh 1.20 (\$0.14) for the cheapest regular ticket. The corresponding compensation, had the government paid it, would have amounted to about Dh 14.6 million (\$1.75 million), higher than the most historic deficits of the company.

The subsidies actually received by MTCs did not bear any relation to losses from various constraints on fares. In this light, the cross-subsidy from regular-fare passengers to discount-fare passengers has been enormous; this largely explains why regular fares have been high enough to be onerous for lower-income people, while at the same time failing to cover operating costs of MTCs.

The Rabat company has received about Dh 30 million since 1977, mainly in the form of capital grants to purchase equipment. (The exchange rate to the U.S. dollar was Dh 4.50 in 1977 and Dh 8.36 in 1977.) Compare this subsidy to the company's accumulated debt of Dh 105 million (\$11.5 million). Casablanca, with its greater size and a debt of about Dh 200 million (\$23.9 million), received relatively less help, about Dh 17 million capital grants and about Dh 26 million in operating subsidies, all of these in the 1980–1982 period. It is not clear whether the government was unable to contribute more, or the MOI was not strong enough to win enough support for MTCs in interministerial budgetary battles. In any case, no direct subsidies were given after 1982, this being a period of intense budgetary crisis in Morocco.

In addition to capital grants, loans from the FEC could be considered as aid, because they were given to companies that were clearly not creditworthy. Data from the 1976–1987 period for Casablanca MTC indicate that the FEC was the main source of investment funds at 65 percent, followed by equity funds at 26 percent and Government grants at 9 percent. When MTCs fell back in loan repayments in 1982, the FEC stopped granting them further loans until 1985, when the decision to reintroduce private operators was accompanied by a fare increase for the MTCs, and some new loans by the FEC were authorized.

Financial aid in the form of capital grants and loans was not enough to permit the MTCs to renew and expand their fleets and support facilities. Because there were no operating subsidies, MTCs dealt with working capital shortages by taking short-term loans and using practices normally considered illegal: failing to pay suppliers of goods and services, social security contributions, taxes, and insurance premiums. For Casablanca, the last two categories accounted for 60 percent of the short-term debt in 1987. This is a particularly inefficient form of covert subsidy, creating a complicated web of arrears and contributing to erosion of the overall financial discipline in the public sector.

Pre deregulation on Attempts to Resolve the Urban Transport Crisis

The list of ideas and approaches used or just considered by the government of Morocco to resolve or at least lessen public transport problems of the country's large cities, before embarking on the deregulation, would have only two significant entries. One of these, the introduction of first-class services in Rabat MTC, was actually implemented. The other entry, making large-scale investments in new transport technologies, has been intermittently considered but never acted on.

First-class services of midsize buses operating in seat-only mode at fares roughly twice the regular fare were conceived by the management of the MTC Rabat as a way of bypassing the blockage of social fares for their standard services. The underlying assumption was that many passengers would both be able and willing to pay higher fares for better services. The revenue from these new services was expected to cover their operating costs, with enough to spare to cross-subsidize regular services. Starting with 40 minibuses at the end of 1984, first-class vehicles grew rapidly to become 46 percent of the fleet owned by the MTC Rabat by the end of 1986. The impact of first-class services was considerable: already in the first year of operation, there were 4.5 million first-class trips compared with 69 million trips for regular services. In 1986, when the patronage of former services collapsed to less than 36 million full-fare-paying passengers, first-class service climbed to nearly 8 million. If any profits were made, however, they were not used to support regular operations but to expand further the first-class services. Thus, improved service for better-off passengers was achieved only at the cost of further erosion of service for regular passengers. This experiment in market segmentation provided precious experience for the coming deregulation of the sector; it would be bitterly ironic if, in the longer run, it also destroyed the survival chances of MTC Rabat.

The other significant approach proposed, investing in new transport technologies in the two cities, derived its inspiration from the evident lack of capacity and low travel speed of MTC bus services (12–14). In a common misreading of a policy problem as a vehicle technology problem, it was believed that rail-based systems would correct both of the earlier shortcomings. Of the three most recent proposals, two included light-rail lines for Casablanca and Rabat, and the third involved a rapid transit system for Casablanca. The envisioned lines were 13 to 15 km long; light-rail alignments were mostly at grade, whereas the rapid transit proposal combined underground, at-grade, and elevated sections. Capital costs of the proposed systems ranged from \$150 million for the light-rail to \$300 million for the rapid transit. The peak-hour patronage forecast for the 1990s was of the order of 8,000 to 10,000 passengers. The consultants estimated that fares similar to those then charged by MTCs would suffice to cover direct operating costs of these new systems.

The government has not acted as yet on any of these proposals, probably because of high capital costs and low passenger volumes forecast by feasibility studies. The projected capital costs of several hundred million dollars would be substantially higher than anything the government had invested in urban transport over the previous two decades and financing would be a major issue as well. Peak demand forecasts under 10,000 passengers per hour must have come as a disappointment and a surprise to the authorities, given severe overcrowding of buses witnessed daily on the streets of Rabat and Casablanca. It is understood that yet newer proposals for a metro in Casablanca have been put forward since 1988; that an attractive financing package might emerge in tandem with a study whose cost estimates would be low enough and patronage forecasts high enough is still possible.

RECOVERY: DEREGULATION IN CASABLANCA AND RABAT

The return of private operators to the two major cities, announced in mid-1984, should be seen as part and parcel of the macroeconomic stabilization program and the reform of the public enterprises undertaken at that time. The process of deregulation was carried out at an unprecedented speed, reflecting a firm commitment by the authorities to this option—private services to be started in Casablanca already by July 1985 and in Rabat by March 1986.

Companies with appropriate technical and financial references were invited to bid for first-class services on existing MTC routes. Vehicles were limited to 25-seater buses, or larger. Each bidder was to propose the minimum-sized fleet to be placed in service, allowing at least 20 percent reserve. Line frequencies and time tables were also to be submitted for approval by the local authorities (the Wilaya). Bidders were invited to propose fares for each line, an annual concession fee, and formulas for the revision of fares and fees, with a proviso that these would be “homogenized” over the service network.

Five companies were initially authorized in Casablanca (increasing to eight by 1988) and six in Rabat. Awards were made for groups of service routes, in an attempt to mix and match routes with high and low passenger demand. Only one

company was awarded a contract for any one route (in addition to MTC services), though the terms allowed a possibility of award to third parties. Initial authorizations were made for about 150 buses in each city (compared to MTC fleets of 150 in Rabat and 320 in Casablanca). Special permits for importing buses were granted to the new operators. The adopted fares were equivalent to first-class fares (Dh 2.2) charged by the MTC Rabat. The concession fee adopted in Casablanca was variable and equal to 5 percent of traffic revenues, requiring that private operators turn in their accounts to local authorities. After indications that a variable fee would pose an enforcement problem, a flat concession fee of Dh 15,000 per line was used in Rabat. Contracts included a fare revision formula: fares could be revised annually, following an operator’s request, provided that the increase calculated by the formula was 5 percent or higher.

Some of the entrepreneurs came from within the passenger transport profession (intercity or tourism). Others were freight carriers or had some relation to transport (e.g., bus manufacture). The remaining private bus operators came from fields like insurance and had no experience in the sector, but were accepted for their ample resources and good standing in the business community. The sources of financing were equally as diverse. Commercial banks were initially reluctant to get involved, thus forcing bidders to rely on equity funds only. This limited access to the market to large, well-to-do companies. Family-owned equity played an important role in Rabat as well, but by that time the business community assessed their risks to be lower and decided to participate, which permitted a mixture of suppliers’ credits, commercial bank loans, and leasing credit. The decrease in risk estimates was considerable, causing interest rate to fall from 27 to 14 percent (19).

There has not been any formal monitoring of the costs and benefits of the deregulation. But, on the basis of circumstantial evidence, the whole experience must be judged an overall success. The growth in the private fleet has been impressive. By the end of 1987, about 200 private buses were operating in Rabat and 520 in Casablanca, up from initial levels of about 150 in each city. When added to 150 and 320 MTC-owned buses in Rabat and Casablanca, respectively, the government’s supply target (one bus in circulation for each 3,000 people) was reached, even without counting buses for own-account transport. The picture is, of course, less impressive when seen in terms of passenger spaces, because many private buses are midsize and standees are not allowed. Still, service availability and quality have improved visibly, even on MTC buses. The worst of the waiting lines have disappeared from streets and terminals (8–10). Concerning the market share of the private operators, a recent lower-bound estimate for Casablanca, based on revenues reported for tax purposes, is about one-third (78 million passengers in 1988 versus 185 million carried by the MTC (20).

The principal beneficiaries of the deregulation on the demand side include all passengers who could afford to switch to first-class services. Evidently, many inhabitants of the two cities could and did. Some among them, though, might have preferred to use improved regular-class services, at fares somewhere between the first-class and the current regular fares. The same may be true of many passengers who remained on MTC buses and who, after the initial relief, are seeing their benefit dwindle. Finally, there has been little

relief to passengers to whom prevailing regular fares have been onerous or unaffordable.

In addition to undisputable benefits to first-class passengers, other benefits of the deregulation have accrued to the national economy: first, the resource mobilization involved about Dh 450 (\$45) million invested in fleets by the private sector (an order-of-magnitude estimate made by this writer), releasing public resources for other uses; second, there has been a reduction in demand for public subsidy, because a large proportion of urban travel is now carried under market conditions; third, some 4,000 new jobs have been created; and fourth, the government has new fiscal revenues from fees and taxes. Finally, the urban transport business must have been profitable to private operators, seeing their numbers multiplied so quickly.

What has been the impact of private competitors on the MTCs? Answers appear to differ considerably from one city to the other. The following statistics illustrate this, but much caution is warranted—the noise caused by a fare increase in August 1986; MTC fleet constraints, especially important in Rabat; and brevity of the adjustment period must be remembered. In 1985, MTC Rabat carried 75.7 million trips, of which 5.2 million were in first class vehicles; in 1986, when private companies operated only three quarters of the year, the total declined by 19 percent to 61.2 million. Changes by market segment varied widely: first-class trips increased from 5.2 to 7.9 million (a 34 percent increase, fueled by a 47 percent increase in fleet and a 38 percent increase in kilometers). The standard passengers at regular fares declined from 52.1 to 35.7 million (a loss of about 32 percent), whereas traffic of monthly pass holders lost about 4 percent. The fleet in circulation has sunk to 149 buses (in 1986) of which only 81 were standard buses (compare to 149 such buses in 1983). Revenue fell by 5 percent and costs grew by 3 percent, despite a hiring freeze that kept the staff under the 1982 level; the resulting operating deficit was a historic high of Dh 15.7 million. At the end of 1986, against current assets of Dh 8.9 million and fixed assets of Dh 50.6 million, the company owed Dh 104.5 of which 59 percent was accounts payable and short-term debt. Arrears owed the FEC (Dh 18.1 million at the end of 1987) were the largest of all municipal company debtors. The large negative difference between current assets and current liabilities explains why MTC Rabat has difficulties meeting its salary obligations and has stopped preventive maintenance. In short, this operator is ailing.

MTC Casablanca has weathered the entry of private operators differently. Following the initial 13 percent loss of passengers in 1985 (also affected by a 43 percent fare increase in 1984), all passenger categories increased in Casablanca in subsequent years, but more so in the social fare category (24 percent since 1984). Total traffic in 1987 is still about 9 percent less than in 1983, but at a different level of supply. Space on public buses, vacated by people transferring to first-class services, is evidently being filled by new passengers paying regular fares and by increased travel of monthly pass holders. With traffic on the upswing and boosted by two successive fare increases, the revenues posted a record Dh 200 million in 1987. Unit costs fell in nominal terms, a result of higher productivity (daily kilometers per bus went from 160 to 197; fleet availability went from 72 to 84 percent; kilometers run per staff went from 6,698 to 7,123). After 10 years of operating

losses, the company posted a surplus in 1987. Fare increases and fresh FEC loans in 1985 and 1987 helped, but did not account alone for this turnaround in Casablanca, as the Rabat experience demonstrated. The competition seems to have been a shot of adrenalin to the MTC Casablanca management, and they tried to compete as best they could within the narrow confines of local and national government regulations imposed on this sector: they evidently both had good ideas and the courage to implement them.

Among problems encountered so far, some are not unusual in a transition period (which does not make them any less serious) and others reflect the speed with which the whole process was implemented. Complaints against private operators center on violations of service agreements—examples include overserving profitable routes, underserving lower-volume routes, leaving terminals only when full (rather than according to schedules), not following agreed routes and stops, and accepting standing passengers. To the MTCs, this is “disloyal competition,” particularly ungrateful in view of generous technical assistance provided by MTC Casablanca to help the new companies in the start-up (11). The downside of greater staff productivity (and lower pay) of private operators has been reckless driving of private buses, resulting in 455 accidents involving private buses in Casablanca in 1987. Overlapping service routes in Casablanca caused numerous conflicts among private operators, a problem avoided in Rabat by a more careful parceling of routes. On the administrative side, problems arose in connection with the stipulation that private operators should submit their accounts for review by the local government and with the ex post imposition of an administrative tax in addition to the agreed concession fee. Income tax collection has also been a problem, but this is not specific to the urban transport sector.

CONTINUING TOWARD RECOVERY

Three sets of interrelated issues loom large at the current crossroads in the evolution of Morocco's urban public transport. The first set is demand related, concerning diverse subgroups of public transport users and would-be users, particularly lower-income travelers. The second set refers to urban public transport modes, their organization, ownership, and technology. The third set has to do with government institutions in the sector.

Demand Aspects

If it is accepted that the problems of better-to-do public transport passengers have been resolved in a lasting manner, passengers remaining on MTC buses and those who are only latent travelers are still awaiting better days. Whether ticket-paying or pass-holding, MTC clients have become somewhat better off as a result of deregulation, but their benefits may dwindle quickly in the absence of a quick action to rehabilitate MTCs. Already these passengers face a decreasing supply of services (particularly in Rabat), and at fares that may claim a significant portion of earnings for some people. With an increasing proportion of MTC trips belonging to groups paying social fares, passengers paying regular fares can only ex-

pect their fares to increase, even if services deteriorate. Moreover, as evident from considerable losses of patronage following fare increases, the existing regular fares are entirely out of reach of some segments of the population.

Also, as noted earlier, some passengers who have shifted to the first-class services would probably prefer using better-quality services of the regular type (standing permitted). All in all, like everywhere else in the world, strong demand for improved regular services at affordable fares must exist in Casablanca and Rabat. The question is: Who is going to supply these services, the public or the private sector? An alternative way to pose this question would be this: What can be done to enable the lower-income strata to pay the level of fares necessary to finance reasonable services?

The problem of affordability is difficult to assail from the demand side. One short-run option that could be explored is that of introducing a system of targeted subsidies for the truly needy segments of the population, the hope being that the elimination of indiscriminate subsidies would take some pressure off of fares. Also in the short run, the adoption of a single-shift day for school and work would reduce the need to travel in the peak. In the longer run, the hope is that economic development of Morocco, particularly employment creation programs, will go on increasing the minimum incomes, thus lifting the affordability threshold for travel. Also, the ongoing improvements in zoning and other aspects of urban planning decisions may result in land use decisions that would reduce journey lengths for some disadvantaged urban residents.

Developments on the Supply Side

In contrast to the demand side, options in the realm of urban transport modes are numerous and promising. These are reviewed according to a mixed ownership and technological classification: MTCs, private operators, services for transport on own-account, paratransit modes, and new technologies.

What to Do with MTCs

The destiny of MTCs is a central issue. Most of them are insolvent, underequipped, and overstaffed. There are large economic and social costs tied to the continuing existence of MTCs in their current state. Yet, they perform a valuable service for the mass of population, make social objectives (arguably) easier to achieve, own considerable fleets and facilities, and employ thousands of people. Three broad evolutionary options for MTCs stand out: restructuring under public ownership, divestiture, and a mixed-ownership approach.

Restructuring Under Public Ownership Restructuring under public ownership would include writing off public debts of MTCs and reprogramming their other debts; agreeing on a mechanism through which the Government would compensate the companies for the imposition of various socially and politically inspired constraints (notably those imposed on fares); setting up productivity targets to minimize the link between

subsidies and inefficient operation; and adopting development plans for MTC organization, staff, methods, and physical assets. The programs for individual companies would be documented in performance contracts, signed by the MOI and the company management. In parallel with company-based actions, a regulatory overhaul would be undertaken to increase the commercial independence of MTCs as a group. The positive aspects of this approach include the retention of a strong public voice in service policies of MTCs and the lowest transition costs (e.g., minimal staff reductions). On the negative side, the national budget might be unable to provide funds needed to rehabilitate and upgrade MTCs in financial and physical terms, and to pay regular subsidies, unless a drastic change in priorities occurs. Even if the funds were forthcoming, the probability that the public sector could ever post significant productivity gains may be low. Also, institutional capacity and discipline needed to prepare and implement the necessary reforms would be considerable; the risk is that reform would get bogged down and never achieve its objectives.

Divestiture This approach would mean turning urban public transport over entirely to the private sector, using a tendering approach already tried in Casablanca and Rabat, with the Government retaining only a supervisory role to maintain a market environment and to ensure that social objectives are achieved. This approach would involve selling the plant and equipment of MTCs to private buyers and using the proceeds to settle the MTCs' outstanding debts. The major problem with this approach would be high, possibly prohibitive social and political costs of laying off MTC employees; no precedent for this course of action exists in North Africa. Otherwise, this approach would make the lightest claims on public funds in the short run, because only modest one-time expenditures would be needed for debt settlements in excess of what the sale of MTC assets would bring. The private sector would bring a promise of considerably lower production costs, thus potentially better services and lower fares for all types of services. The flip side of the coin has increased risks of cartelization and neglecting social objectives. The monitoring effort to ensure that rules of the game are followed would be costly to organize and difficult to sustain. The success or otherwise of this approach (and of the current partial deregulation) would hinge on the freedom of private operators to set fares, though this issue cannot be avoided under any option, including the continuation of the status quo. The dangers involved with controlled fares have been illustrated earlier. The risk with deregulated fares would be that, at worst, lower-income strata might be priced out of the public transport market altogether, especially on low-volume routes. (Should this happen, the Government would have to provide direct subsidy to affected groups and subsidize operations on low-volume routes, but with competitive awards of service, as in the United Kingdom). The issue is, of course, to steer a prudent course between the Scylla of affordability for passengers and Charybdis of financial viability for operators.

Restructuring of MTCs with Mixed Public-Private Ownership This approach would be a compromise in which the

private partner would bring in funds and expertise in exchange for guaranteed profits and managerial fees. The Government would retain a direct presence in service and fare decisions, and staff reductions would be minor. Difficulties should be anticipated in finding investors under this approach, the risk being that social policies and budgetary responsibilities would be handled by different parts of the Government, casting doubt over the received financial guarantees.

Future of Private Operators

Assuming that coexistence of private entrepreneurs and MTCs would continue, many of the current problems are a matter for fine tuning. Of the truly vital issues, two were mentioned under the divestiture option above, i.e., how much free rein would be allowed in fare setting and would the public authorities be able to supervise the adherence to service agreements. The fare issue will be tested soon, in view of the forthcoming overhaul and replacement decisions of the private sector. A major longer-run question for private operators concerns the expansion of their services into the regular (as opposed to first-class) market. This process would bring them into direct competition with MTCs, as well as among themselves.

Paratransit

Certain forms of paratransit are too well developed in Morocco, whereas others are developed poorly or not at all. Own-account transport services belong to the former group, likely the most expensive public transport mode in Morocco. If the Government wishes to subsidize its employees, this should be done at least cost. Taxis and diverse flexiroute arrangements, using minibuses and large automobiles, belong to a group not only neglected, but downright repressed; opportunity costs of this policy must be large, both in transport service and the employment dimension. Paratransit is the ultimate market mode in urban transport, in the sense that it is adaptable to a wide range of services and at a variety of prices (and thus to a corresponding range of incomes). The evidence is convincing that people in cities that permit and foster paratransit alongside the conventional public transport modes enjoy much higher levels of personal mobility than where paratransit is absent (19). A deregulation of this mode is thus long overdue.

Rail-Based Transport Modes

When they operate in a protected right-of-way, these modes have greater capacity, travel speed, comfort, and safety than the conventional street bus operations. They can also have real and beneficial, but difficult to measure, impacts on urban life and growth. Under certain conditions of construction costs, operating efficiency, and patronage, they can come close to being economically and financially viable (21). It does not appear that enough of these conditions could be met at present in Casablanca and Rabat, particularly not the patronage and

fares needed for a reasonable recovery of costs. Moreover, impacts of a new metro or a light-rail system therein would be limited to one or two major corridors; problems with the MTCs and, generally, problems caused by inadequate sector policies, would remain. Only the stakes would be higher. These sophisticated systems themselves would require efficient organization and management to achieve their full potential. Otherwise, because of their considerable investment costs, they would end up creating even greater losses than has been the case with MTCs. Two possible counterarguments to these would be that (a) the magnitude of investment in rail technology would impose its own discipline on the policy process and contribute to the resolution of the long-standing tug-of-war between social objectives and budget realities in Morocco; and (b) rail-based projects would seem important enough to reclaim major city streets from the general traffic and reserve them for public transport vehicles only (as was done in Tunis). Both counterarguments imply that large-scale investments should be used as means of changing public policies (concerning transit fares or exclusivity of the street right-of-way). This being both a risky and a poor use of scarce capital, large-scale investments should not be seriously considered in Moroccan cities before other reforms have brought a measure of steady-state viability into public and private sector urban transport operations.

The Institutional Dimension

Considerable institutional capacity would be required to guide the evolution of the urban public transport sector in Morocco through policy and investment options outlined earlier. The history of MTCs demonstrates that past public policies and actions have been neither consistent nor comprehensive. The consistency has been most conspicuously absent in the area of fare setting and the related compensation. As for comprehensiveness, whole areas of intervention (traffic and parking management, automobile registration and taxation, staggering of work hours, using one-shift school days) have been hardly touched, or not at all. Some of the difficulties reflect a government with a broad scope of interest, to the detriment of the managerial prerogatives of public enterprises and local authorities, and creating bottlenecks in their own activities. Other problems can be traced to a lack of technical capacity in the national and local institutions managing the urban transport sector. Engineering and economic know-how of urban public transport, essential for developing a good policy, is not well represented in the MOI, nor in city governments. An important related area, urban traffic management, is not even acknowledged as a distinct profession in Morocco.

Independent of the exact strategy selected for the treatment of the MTCs, or the detailed composition of the overall policy, the first priority on the road to recovery is an investment in the institutional system itself. Assuming that the requisite political consensus is reached, institutional development should be done by building up the technical capacity both of national and local government personnel, the latter in parallel with gradually decentralizing the resource generation and the decision making. At the national level, new forms of cooperation among ministries and other relevant institutions should be sought to ensure consistency of actions.

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The views and interpretations expressed herein are those of the author only and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent.

Publication of this paper sponsored by Committee on Public Transportation Planning and Development.